



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Christopher T. Grabowski

Serial No.: 10/593,138

Filed: 09/18/2006

Title: EN-ROUTE NAVIGATION DISPLAY METHOD AND APPARATUS  
USING HEAD-UP DISPLAY

:  
:  
Attorney Docket No: MVS-1

:  
:Art Unit:

:  
:Examiner:

**INFORMATION DISCLOSURE STATEMENT**

In accordance with 37 CFR 1.97, the enclosed Information Disclosure Statement, with attached reference(s), is submitted for consideration in the above-identified application.

Copies

Copies of all the non-US-patent references are enclosed.

Translations

Included herewith are translations of the cited JP patents

Applicants do not have a translation of the cited DE patent.

Relevance

Pursuant to 37 C.F.R. 1.98(a)(3)(i), the following is a statement of the relevance of each of the non-English-language references cited herein:

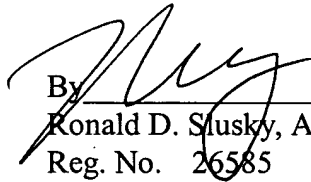
**JP05022753:** Okimura et al patent JP05022753 describes a stereoscopic picture display unit which is provided with a shape changing screen (or "configuration adjustable screen") whose shape varies in conformity with given three-dimensional shape data. One embodiment of applicants' system has a projection screen (shown on Fig 42A and Fig 42B) which has linear actuators arranged for shifting, tilting and reshaping the screen surface in real-time, to correspond to the topography of the terrain over which the virtual cable is being displayed.

**JP08175226:** Ashihara patent JP08175226 describes a display device for vehicle where the display data is composed of only the outlines, and its semitransparent screen can be seen in the condition superposing the display data and the scene in front of the vehicle. This teaches the advantages of reducing the complexity and a scene obscuration potential of the presented image.

**JP09229707:** Shinozuka patent JP09229707 describes displaying a display image of a guide route above a road actually seen, with the use of a windshield, where the image is in a form of a flat map which correlates with a mirror-image of the ground ahead. In applicants' illustrative embodiments the image is a 3-dimensional line (not a map) and it is conforming to the ground, e.g. it goes up and down when the ground is not flat.

**DE10344684:** Breinich et al. patent DE10344684 describes head-up display, in particular for the application in motor vehicles, which employs laser scanning using moveable mirror, a diffuser, an optical cube combiner for combining two laser beams, and technique of image distortion pre-correction. Various embodiments of applicants' disclosed display device include some combinations of the devices mentioned.

Respectfully,  
Christopher T. Grabowski

By 

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**INFORMATION  
DISCLOSURE  
STATEMENT BY  
APPLICANT**

Application Number 10/593,138  
 Filing Date 09/18/2006  
 First Named Inventor Christopher T. Grabowski  
 Group Art Unit

(use as many sheets as (necessary))

Examiner Name

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## U.S. PATENT DOCUMENTS

Exami ner Initials *	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figure Appears
		Number	Kind Code <sup>2</sup> (if known)			
		3,887,273		Griffiths	06-03-1975	
		4,207,430		Harada , et al.	06-10-1980	
		4,274,706		Tangonan	06-23-1981	
		4,525,024		Tatsuno , et al.	06-25-1985	
		4,537,483		Turner	08-27-1985	
		4,711,544		Iino , et al.	12-08-1987	
		4,740,780		Brown , et al.	04-26-1988	
		4,884,135		Schiffman	11-28-1989	
		5,002,364		Steenblik	03-26-1991	
		5,042,909		Garcia, Jr. , et al.	08-27-1991	
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**Complete if Known**

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		Number	Kind Code <sup>2</sup> (if known)			
		5,231,538		Anderson	07-27-1993	
		5,251,056		Lee	10-05-1993	
		5,359,444		Piosenka , et al.	10-25-1994	
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		5,954,414		Tsao	09-21-1999	
		6,043,937		Hudson , et al.	03-28-2000	
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		Number	Kind Code <sup>2</sup> (if known)			
		6,285,317		Ong	09-04-2001	
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		7,072,764		Donath , et al.	07-04-2006	



Substitute for form 1449A/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as (necessary))				<b>Complete if Known</b>	
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				Examiner Name	
Sheet	5	of	5	Attorney Docket Number	MVS-1

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. *	Include name of the author (in CAPITAL LETTERS), title of the article(when appropriate), title of the item(book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
		BARRY G. BLUNDELL and ADAM J. SCHWARZ, Volumetric Three-dimensional Display Systems, 2000, pages 57-61, 67-68, 115-116, 130-131, 204-207, ISBN 0-471-23928-3, John Willey & Sons, Inc., New York, USA	<input type="checkbox"/>
		ANSELM SPOERRI, Novel Route Guidance Displays, IEEE Vehicle Navigation & Information Systems conference, October 1993, Ottawa, Canada	<input type="checkbox"/>
		STEPHEN SCOTT-YOUNG, Seeing the Road Ahead: GPS-Augmented Reality Aids Drivers, GPS World magazine, Nov 1, 2003, the front cover and pp. 22-28, Vol. 14, No. 11, published monthly by Questex Media Group, Santa Ana, CA, USA	<input type="checkbox"/>
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